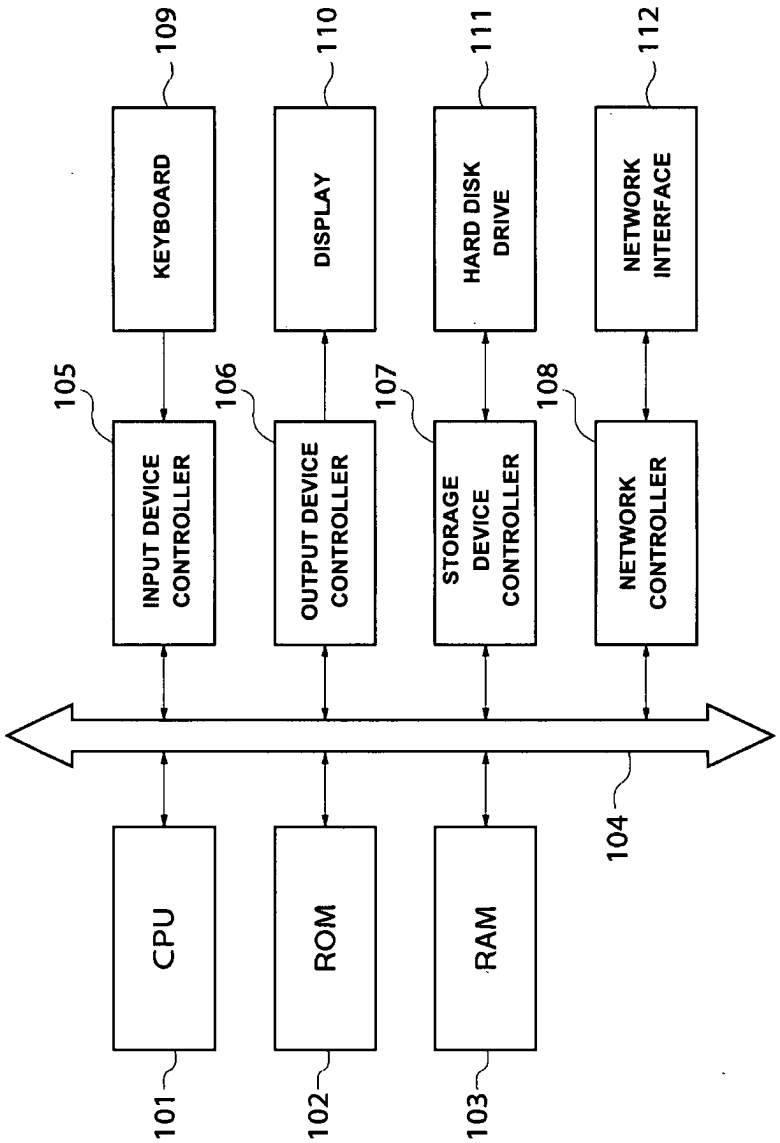

109
110
111
112
KEYBOARD
DISPLAY
HARD DISK DRIVE
NETWORK INTERFACE
105
106
107
108
INPUT DEVICE CONTROLLER
OUTPUT DEVICE CONTROLLER
STORAGE DEVICE CONTROLLER
NETWORK CONTROLLER
104
CPU
ROM
RAM
101
102
103

Fig. 1

Hogan & Hartson 83366.0042
Jun FUJISAWA et al.
Image forming apparatus...
EV 325 216 615 US
15 Drawing Sheets; Sheet 2 of 15

Fig. 2

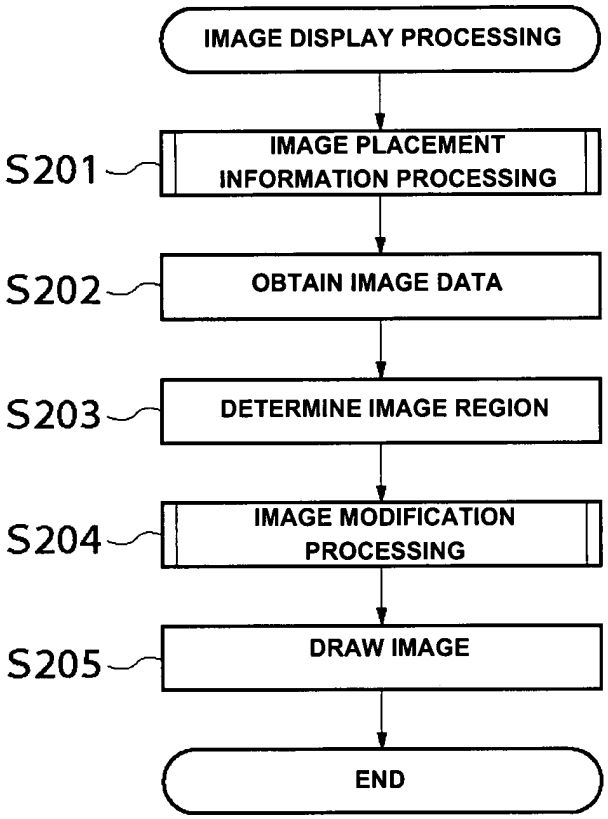


**Fig. 3**

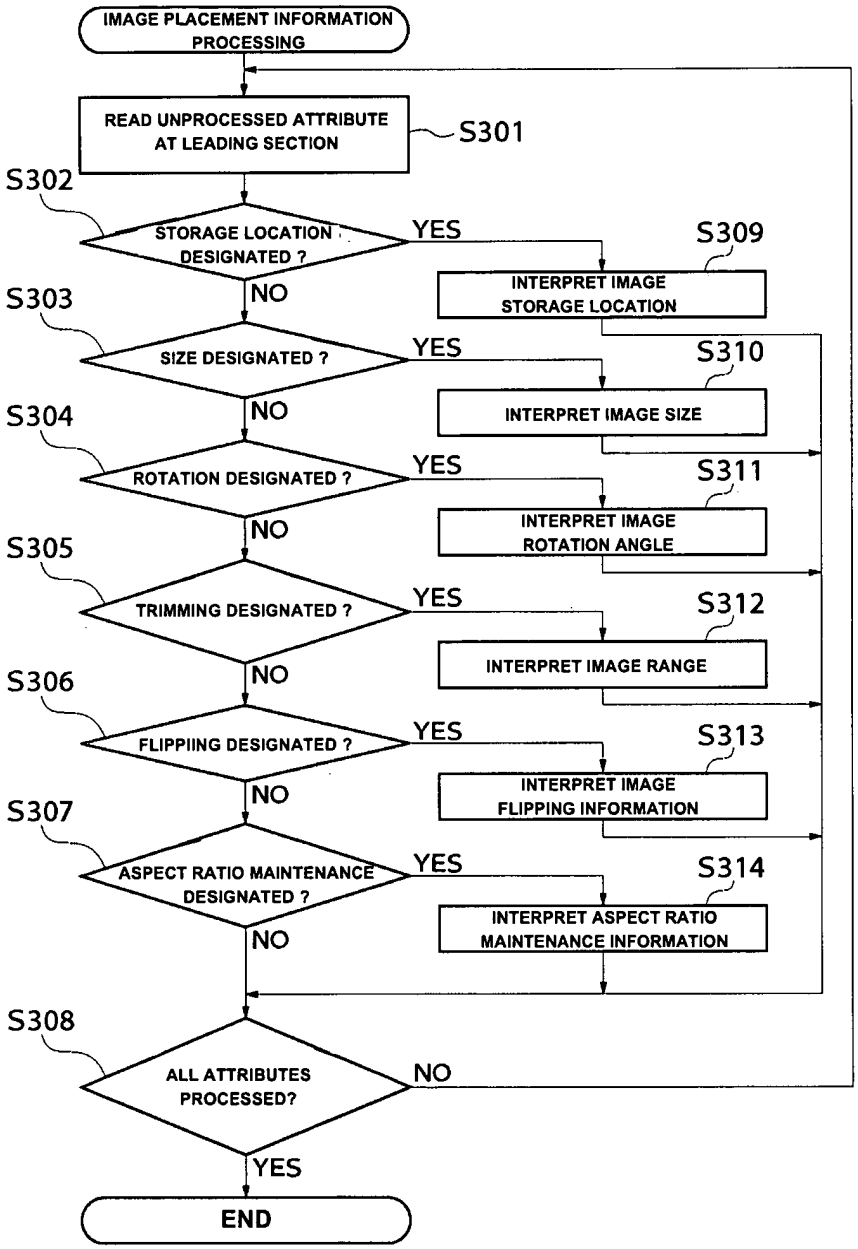


IMAGE PLACEMENT INFORMATION PROCESSING
READ UNPROCESSED ATTRIBUTE AT LEADING SECTION
S301
S302
STORAGE LOCATION DESIGNATED ?
YES
S309
INTERPRET IMAGE STORAGE LOCATION
NO
S303
SIZE DESIGNATED ?
YES
S310
INTERPRET IMAGE SIZE
NO
S304
ROTATION DESIGNATED ?
YES
S311
INTERPRET IMAGE ROTATION ANGLE
NO
S305
TRIMMING DESIGNATED ?
YES
S312
INTERPRET IMAGE RANGE
NO
S306
FLIPPIING DESIGNATED ?
YES
S313
INTERPRET IMAGE FLIPPING INFORMATION
NO
S307
ASPECT RATIO MAINTENANCE DESIGNATED ?
YES
S314
INTERPRET ASPECT RATIO MAINTENANCE INFORMATION
NO
S308
ALL ATTRIBUTES PROCESSED?
NO
YES
END

**Fig. 4**

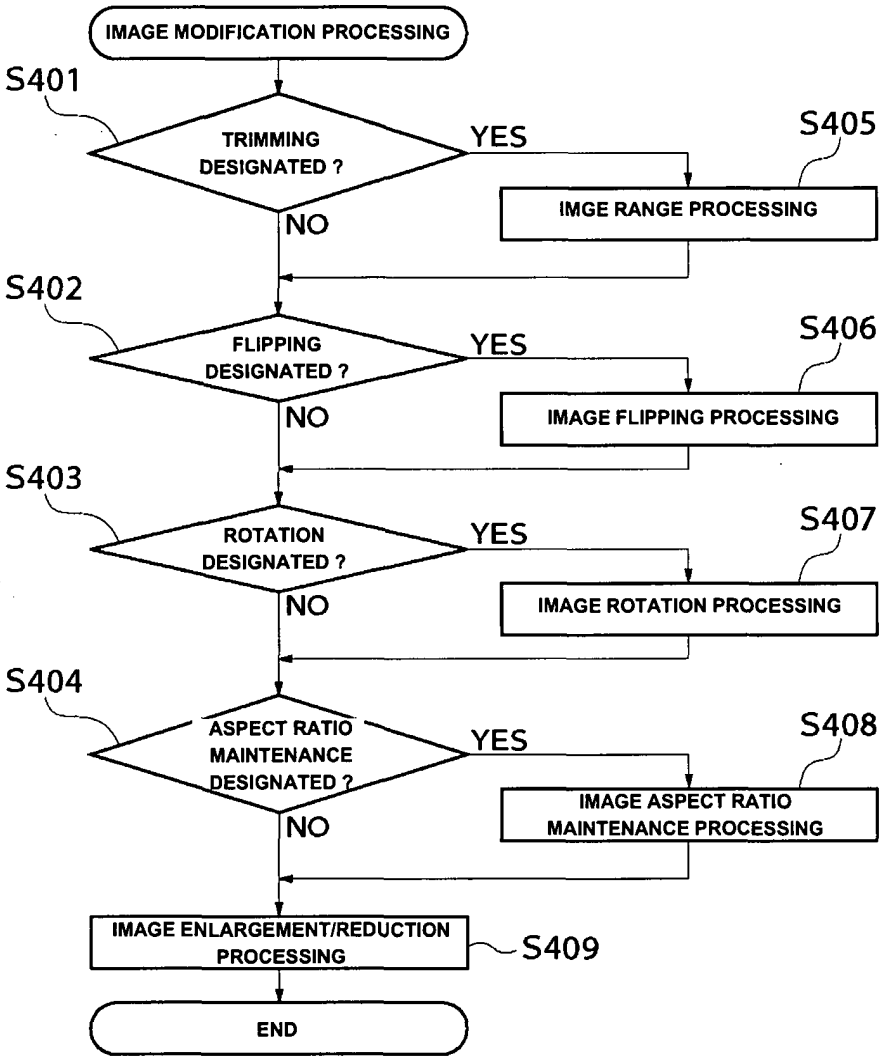


IMAGE MODIFICATION PROCESSING
S401
TRIMMING DESIGNATED ?
YES
S405
IMGE RANGE PROCESSING
NO
S402
FLIPPING DESIGNATED ?
YES
S406
IMAGE FLIPPING PROCESSING
NO
S403
ROTATION DESIGNATED ?
YES
S407
IMAGE ROTATION PROCESSING
NO
S404
ASPECT RATIO MAINTENANCE DESIGNATED ?
YES
S408
IMAGE ASPECT RATIO MAINTENANCE PROCESSING
NO
IMAGE ENLARGEMENT/REDUCTION PROCESSING
S409
END

Fig. 5

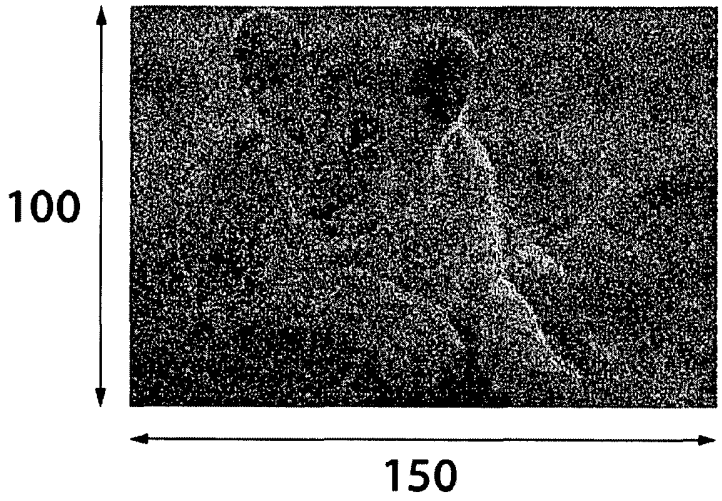


Fig. 6 (a)

```
<?xml version="1.0"?>
<svg>
    <image xlink:href="image.jpeg"
        width="100" height="100"
    </image>
</svg>
```

Fig. 6 (b)

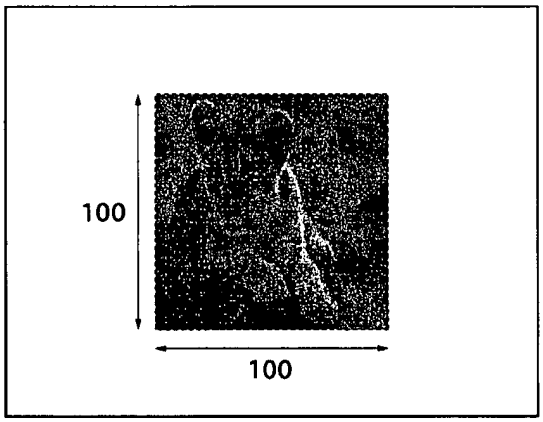


Fig. 7 (a)

```
<?xml version="1.0"?>
<svg>
    <image xlink:href="image.jpeg"
        width="100" height="100"
        ximage:rotate="45">
        <!-- Rotate image 45 degrees -->
    </image>
</svg>
```

Fig. 7 (b)

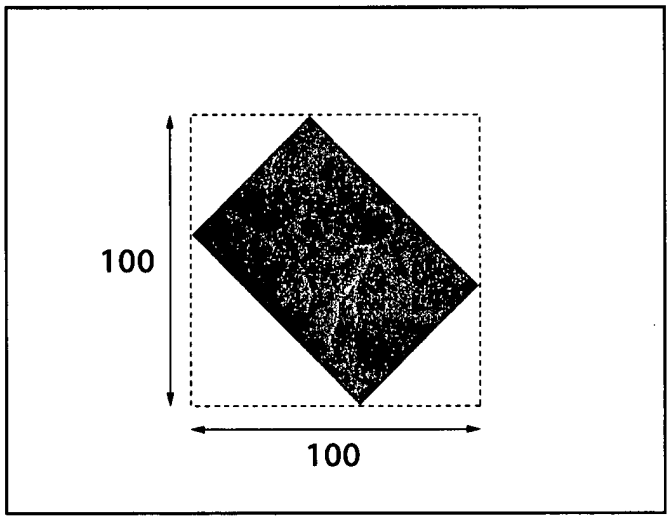
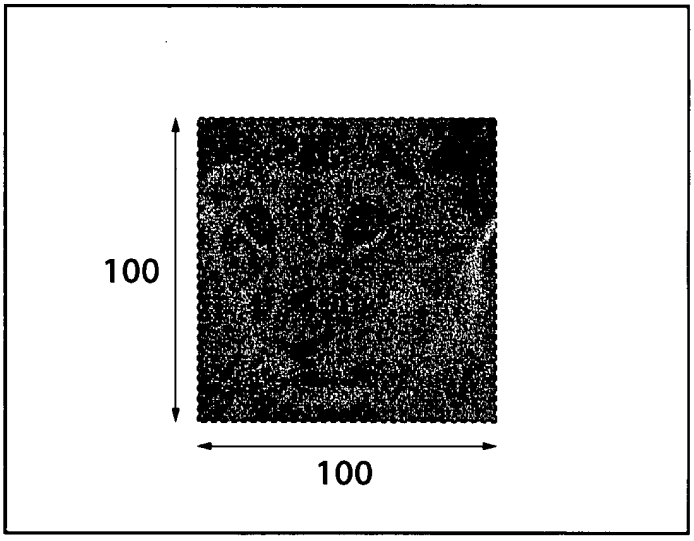


Fig. 8 (a)

```
<?xml version="1.0"?>
<svg>
    <image xlink:href="image.jpeg"
        width="100" height="100"
        ximage:crop="25 10 30 30">
        <!-- Designate image trimming range    -->
    </image>
</svg>
```

Fig. 8 (b)



Hogan & Hartson 83366.0042
Jun FUJISAWA et al.
Image forming apparatus...
EV 325 216 615 US
15 Drawing Sheets; Sheet 9 of 15

Fig. 9 (a)

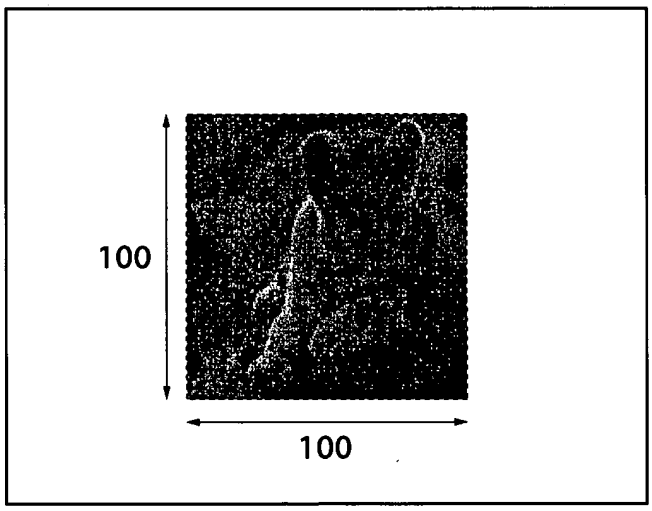
```
<?xml version="1.0"?>
<svg>
    <image xlink:href="image.jpeg"
        width="100" height="100"
        ximage:flip="horizontal">
        <!--Horizontally flip image-->
    </image>
</svg>
```

Fig. 9 (b)

**[Designation of flip direction]**

**non: Do not flip**
**horizontal: Flip in horizontal direction (right-left flipping)**
**vertical: Flip in vertical direction (up-down flipping)**

Fig. 9 (c)



Hogan & Hartson 83366.0042
Jun FUJISAWA et al.
Image forming apparatus...
EV 325 216 615 US
15 Drawing Sheets; Sheet 10 of 15

Fig. 10 (a)

```
<?xml version="1.0"?>
<svg>
    <image xlink:href="image.jpeg"
        width="100" height="100"
        ximage:fit="xMidYMid meet">
        <!-- Designate to maintain image aspect ratio -->
    </image>
</svg>
```

Fig. 10 (b)

**[Designation of arrangement]**

non: Image and display rectangle to be matched without maintaining aspect ratio
xMinYMin: Left upper ends of image and display rectangle to be aligned while maintaining aspect ratio
xMidYMin: Left-right center upper ends of image and display rectangle to be aligned while maintaining aspect ratio
xMaxYMin: Right upper ends of image and display rectangle to be aligned while maintaining aspect ratio
xMinYMid: Up-down center left ends of image and display rectangle to be aligned while maintaining aspect ratio
xMidYMid: Centers of image and display rectangle to be aligned while maintaining aspect ratio
xMaxYMid: Up-down center right ends of image and display rectangle to be aligned while maintaining aspect ratio
xMinYMax: Left lower ends of image and display rectangle to be aligned while maintaining aspect ratio
xMidYMax: Left-right center lower ends of image and display rectangle to be aligned while maintaining aspect ratio
xMaxYMax: Right lower ends of image and display rectangle to be aligned while maintaining aspect

**[Designation of margin]**

meet: Display the entire image (blank margin is created)
slice: Display without any blank margin (A portion of image may not be displayed)

Fig. 10 (c)

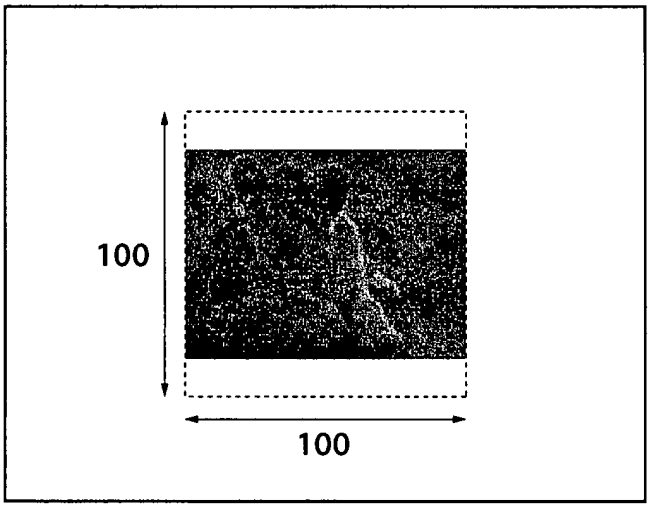
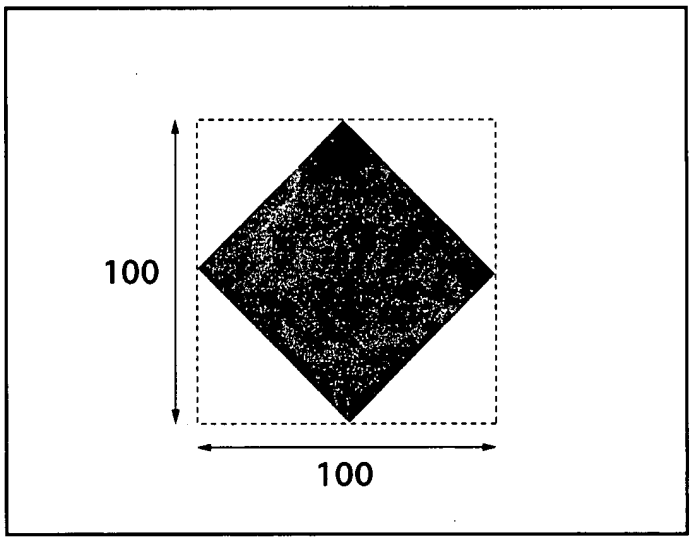


Fig. 11 (a)

```
<?xml version="1.0"?>
<svg>
    <image xlink:href="image.jpeg"
        width="100" height="100"
        ximage:crop="25 10 30 30"
        <!--  Designate image trimming range  -->
        ximage:flip="horizontal"
        <!-- Horizontally flip image -->
        ximage:rotate="45"
        <!-- Rotate image 45 degrees -->
        ximage:fit="xMidYMid meet"
        <!--Designate to maintain image aspect ratio -->
    </image>
</svg>
```

Fig. 11 (b)



Hogan & Hartson 83366.0042
Jun FUJISAWA et al.
Image forming apparatus...
EV 325 216 615 US
15 Drawing Sheets; Sheet 12 of 15

Fig. 12

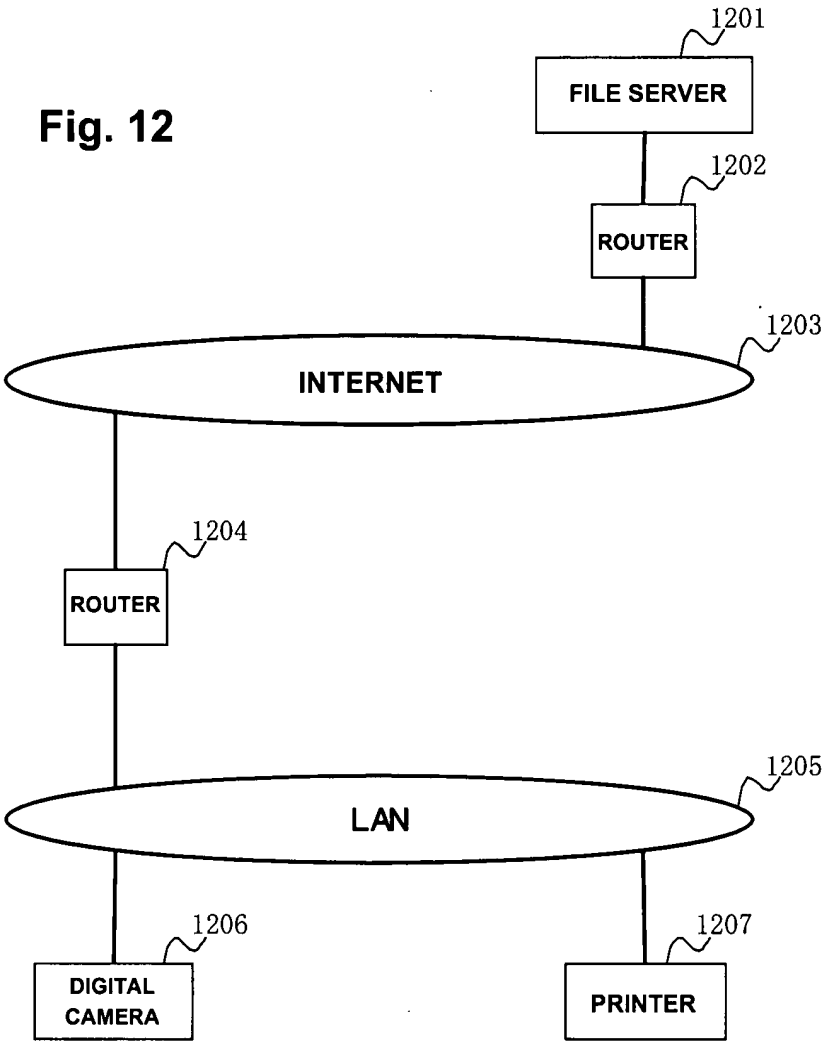
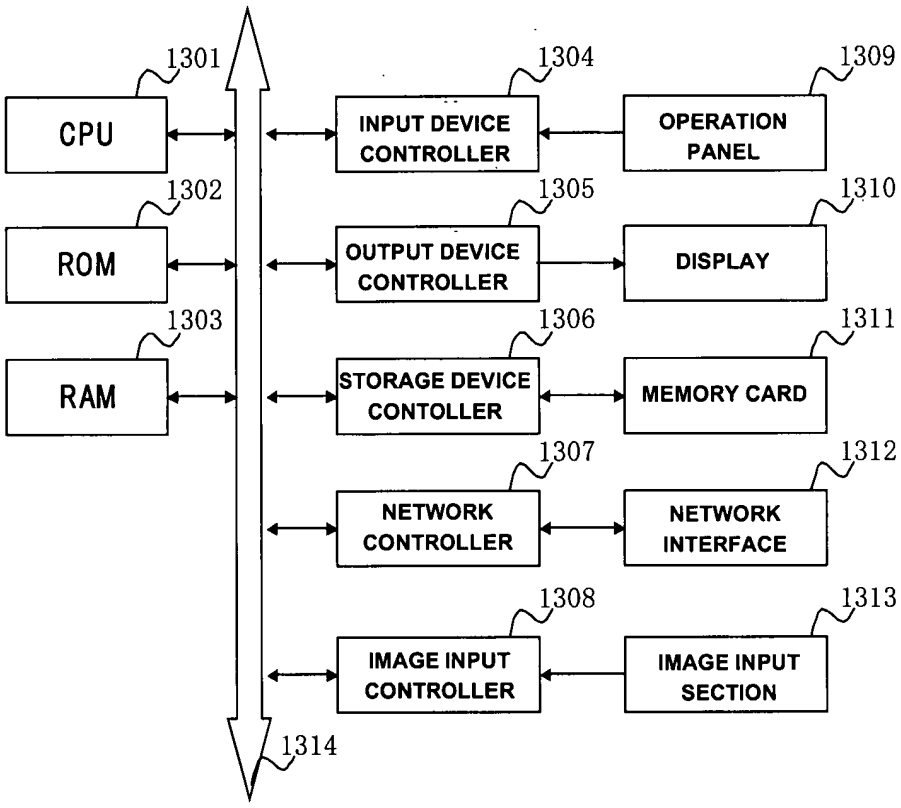
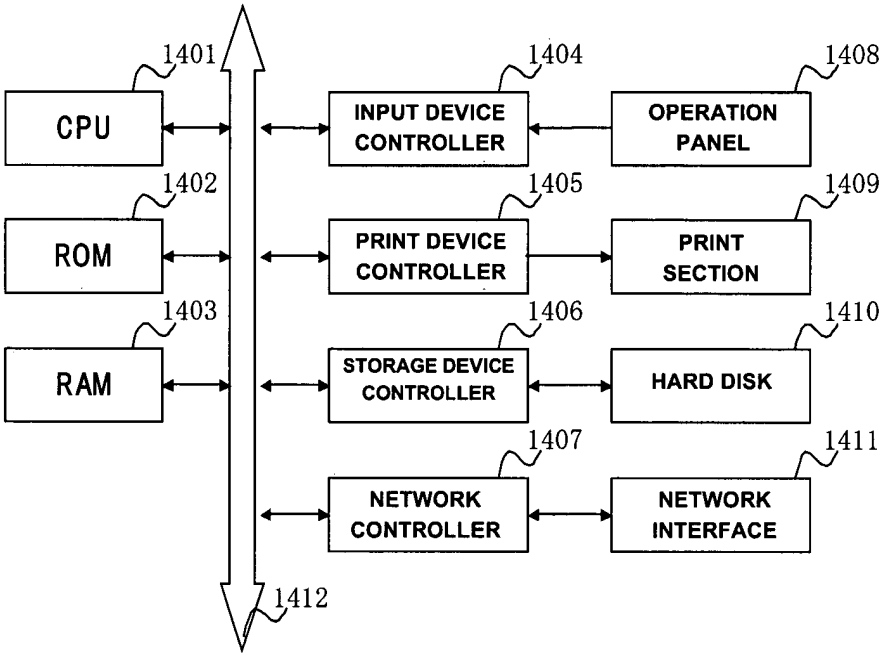


**Fig. 13**


1301
CPU
1302
ROM
1303
RAM
1304
INPUT DEVICE CONTROLLER
1305
OUTPUT DEVICE CONTROLLER
1306
STORAGE DEVICE CONTOLLER
1307
NETWORK CONTROLLER
1308
IMAGE INPUT CONTROLLER
1309
OPERATION PANEL
1310
DISPLAY
1311
MEMORY CARD
1312
NETWORK INTERFACE
1313
IMAGE INPUT SECTION
1314

Hogan & Hartson 83366.0042
Jun FUJISAWA et al.
Image forming apparatus...
EV 325 216 615 US
15 Drawing Sheets; Sheet 14 of 15

**Fig. 14**



Hogan & Hartson 83366.0042
Jun FUJISAWA et al.
Image forming apparatus...
EV 325 216 615 US
15 Drawing Sheets; Sheet 15 of 15

**Fig. 15**

```
<?xml version="1.0"?>
<svg>
    <image xlink:href=""
        width="100" height="100"
        ximage:rotate="45">
        <!-- Rotate image 45 degrees -->
    </image>
</svg>
```